

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A toner for electrostatic development comprising:

toner particles, each toner particle comprising:

a binder resin comprising a modified polyester resin and a crystalline polyester resin;

and

a colorant,

wherein the toner particles are obtained by a process comprising the steps of:

subjecting [[the]] a modified polyester resin prepolymer containing at least an isocyanate or epoxy group to at least one of dissolving and dispersing in an organic solvent to yield a solution or dispersion, wherein the modified polyester resin being reactive results from reaction of the modified polyester prepolymer with a compound having an active hydrogen group;

mixing the solution or dispersion with an aqueous medium comprising resin particles; and

subjecting the modified polyester resin to at least one of crosslinking and elongation in the aqueous medium.

Claim 2 (Original): A toner for electrostatic development according to Claim 1, wherein the binder resin comprises:

the modified polyester resin (i),
an unmodified polyester resin (ii), and
the crystalline polyester resin (iii),

wherein the weight ratio of the modified polyester resin (i) to the total of the unmodified polyester resin (ii) and the crystalline polyester resin (iii) is from 5:95 to 25:75, and

wherein the weight ratio of the unmodified polyester resin (ii) to the crystalline polyester resin (iii) is from 99:1 to 50:50.

Claim 3 (Original): A toner for electrostatic development according to Claim 1, wherein the toner has a glass transition point Tg of 40°C to 70°C.

Claim 4 (Original): A toner for electrostatic development according to Claim 1, wherein the toner has a flow beginning temperature Tfb of 70°C to 150°C.

Claim 5 (Original): A toner for electrostatic development according to Claim 1, wherein the toner particles have a volume-average particle diameter of 4 µm to 8 µm.

Claim 6 (Original): A toner for electrostatic development according to Claim 1, wherein the toner particles have a volume-average particle diameter Dv and a number-average particle diameter Dn, and wherein the ratio Dv/Dn of Dv to Dn is from 1.00 to 1.25.

Claim 7 (Original): A toner for electrostatic development according to Claim 1, wherein the toner particles have an average sphericity of 0.95 to 0.99.

Claim 8 (Previously Presented): A toner for electrostatic development according to Claim 1, wherein, in a molecular weight distribution of tetrahydrofuran (THF)-soluble components of the polyester resins in the toner, the peak molecular weight is 1,000 to 30,000,

the content of a component having a molecular weight of 30,000 or more is 1% by volume to 80% by volume, and the number-average molecular weight is from 2,000 to 15,000.

Claim 9 (Original): A toner for electrostatic development according to Claim 8, wherein, in a molecular weight distribution of tetrahydrofuran (THF) soluble components of the polyester resins in the toner, the content of a component having a molecular weight of 1,000 or less is from 0.1% by volume to 5.0% by volume.

Claim 10 (Original): A toner for electrostatic development according to Claim 8, wherein the content of tetrahydrofuran-insoluble components in the polyester resins in the toner is from 1% by volume to 15% by volume.

Claim 11 (Original): A toner for electrostatic development according to Claim 1, wherein the resin particles have a volume-average particle diameter of 5 nm to 500 nm.

Claim 12 (Original): A toner for electrostatic development according to Claim 1, wherein the toner particle further comprises a releasing agent, wherein the releasing agent is a wax immiscible with the binder resin.

Claim 13 (Original): A toner for electrostatic development according to Claim 12, wherein the wax is a polyalkanoic acid ester.

Claim 14 (Previously Presented): A toner for electrostatic development according to Claim 1, the toner particle further comprising a lubricant, wherein the lubricant is capable of

controlling the miscibility of the crystalline polyester resin with the other components in the binder resin.

Claim 15 (Original): A toner for electrostatic development according to Claim 14, wherein the lubricant is at least one selected from the group consisting of montanic acid wax, montanic ester wax and partially saponified ester wax.

Claim 16 (Previously Presented): A toner for electrostatic development according to Claim 1, wherein the toner particle further comprises a charge control agent.

Claim 17 (Original): A toner for electrostatic development according to Claim 1, wherein the crystalline polyester resin is dispersed in the toner particle wherein the dispersed particle of the crystalline polyester resin has a major axis of 0.2 μm to 3.0 μm .

Claim 18 (Original): A toner for electrostatic development according to Claim 1, wherein the crystalline polyester resin has an endothermic peak temperature in differential scanning calorimetry (DSC) of 50°C to 150°C.

Claim 19 (Original): A toner for electrostatic development according to Claim 1, wherein, in a molecular weight distribution of o-dichlorobenzene-soluble component in the crystalline polyester resin determined by gel permeation chromatography (GPC), the o-dichlorobenzene-soluble component has a weight-average molecular weight Mw of 1,000 to 6,500, a number-average molecular weight Mn of 500 to 2,000, and a ratio Mw/Mn of Mw to Mn of 2 to 5.

Claim 20 (Original): A toner for electrostatic development according to Claim 19, wherein the weight-average molecular weight Mw is 5,500 to 6,500, the number-average molecular weight Mn is 1,300 to 1,500, and the ratio Mw/Mn is from 2 to 5.

Claim 21 (Original): A toner for electrostatic development according to Claim 1, wherein the crystalline polyester resin is represented by following Formula (1):



wherein R₁ and R₂ are each a hydrocarbon group having 1 to 20 carbon atoms.

Claim 22 (Original): A toner for electrostatic development according to Claim 1, wherein the crystalline polyester resin comprises an alcohol component and an acid component, wherein the alcohol component comprises a diol compound having 2 to 6 carbon atoms and the acid component comprises at least one selected from the group consisting of maleic acid, fumaric acid, succinic acid and derivatives thereof.

Claim 23 (Original): A toner for electrostatic development according to Claim 22, wherein the alcohol component comprises at least one selected from the group consisting of 1,4-butanediol, 1,6-hexanediol and derivatives thereof.

Claim 24 (Original): A toner for electrostatic development according to Claim 1, wherein the crystalline polyester resin has a glass transition point Tg of 30°C to 130°C and a F_{1/2} temperature of 60°C to 130°C.

Claim 25 (Original): A toner for electrostatic development according to Claim 1, wherein the crystalline polyester resin has an acid value of 20 mgKOH/g to 45 mgKOH/g.

Claim 26 (Original): A toner for electrostatic development according to Claim 1, wherein the crystalline polyester resin has a hydroxyl value of 5 mgKOH/g to 50 mgKOH/g.

Claim 27 (Original): A toner for electrostatic development according to Claim 1, wherein the crystalline polyester resin shows diffraction peaks at least at points of 2θ of 19° to 20°, 21° to 22°, 23° to 25°, and 29° to 31° in an X-ray diffraction pattern determined with an X-ray powder diffractometer.

Claim 28 (Currently Amended): A toner for electrostatic development according to Claim 1, wherein the modified polyester resin ~~reactive with a compound having an active hydrogen group~~, is a modified polyester resin capable of having a urea bond.

Claim 29 (Original): A toner for electrostatic development according to Claim 1, wherein the process further comprises a step of removing the organic solvent with an application of at least one of reduced pressure and heat.

Claim 30 (Currently Amended): A toner for electrostatic development according to Claim 1, wherein the process further comprises the steps of subjecting the crystalline polyester resin to at least one of dissolving and dispersing in an organic solvent as particles having a volume-average particle diameter of 0.2 μm to 3 μm to yield a dispersion; and mixing the dispersion with the aqueous medium together with the modified polyester resin ~~reactive with a compound having an active hydrogen group~~.

Claim 31 (Currently Amended): A toner for electrostatic development according to Claim 1, wherein the process further comprises the steps of dissolving or dispersing the colorant in an organic solvent to yield a solution or dispersion, and mixing the solution or dispersion with the aqueous medium together with the modified polyester resin ~~reactive with a compound having an active hydrogen group.~~

Claim 32 (Original): A toner for electrostatic development according to Claim 31, wherein the process further comprises the steps of kneading the colorant and at least part of the binder resin with water to yield a composition; dissolving or dispersing the composition in an organic solvent to yield a solution or dispersion; and mixing the solution or dispersion with the aqueous medium.

Claim 33 (Original): A toner for electrostatic development according to Claim 1, wherein the colorant is dispersed in the toner particles as particles having a number-average particle diameter of 0.5 μm or less, and wherein the content of colorant particles having a number-average particle diameter of 0.7 μm or more is 5% by number or less.

Claim 34 (Original): A toner for electrostatic development according to Claim 2, wherein the unmodified polyester resin (ii) has a glass transition point Tg of 40°C to 80°C.

Claim 35 (Original): A toner for electrostatic development according to Claim 2, wherein the unmodified polyester resin (ii) has a weight-average molecular weight of 2,000 to 90,000.

Claim 36 (Original): A toner for electrostatic development according to Claim 12, wherein the wax has a melting point of 40°C to 160°C.

Claim 37 (Previously Presented): A toner for electrostatic development according to Claim 1, wherein the toner particle comprises an external additive, the external additive comprising at least one of inorganic particles and resin particles.

Claim 38 (Currently Amended): A process for producing a toner for electrostatic development, comprising the steps of:

mixing an aqueous medium comprising resin particles with:

(1) an organic solvent comprising a modified polyester resin prepolymer containing at least an isocyanate or epoxy group being subjected to at least one of dissolving and dispersing therein wherein [[the]] a modified polyester is reactive resin results from reaction of the modified polyester prepolymer with a compound having an active hydrogen group,

(2) an organic solvent comprising a crystalline polyester resin dispersed therein as particles having a volume-average particle diameter of 0.2 μm to 3 μm, and

(3) an organic solvent comprising a colorant dissolved or dispersed therein; subjecting the modified polyester resin to at least one of crosslinking and elongation in the aqueous medium; and

removing the organic solvents,

wherein the toner comprises a binder resin and the colorant, and

wherein the binder resin comprises the modified polyester resin and a crystalline polyester resin.

Claim 39 (Currently Amended): A one-component developer comprising:
a toner,
wherein the toner comprises toner particles, each toner particle comprising:
a binder resin comprising a modified polyester resin and a crystalline polyester resin;
and
a colorant,
wherein the toner particles are obtained by a process comprising the steps of:
subjecting [[the]] a modified polyester resin prepolymer containing at least an isocyanate or epoxy group to at least one of dissolving and dispersing in an organic solvent to yield a solution or dispersion, the modified polyester resin being reactive is a result of reaction of the modified polyester prepolymer with a compound having an active hydrogen group;
mixing the solution or dispersion with an aqueous medium comprising resin particles, and
subjecting the modified polyester resin to at least one of crosslinking and elongation in the aqueous medium.

Claim 40 (Currently Amended): A two-component developer comprising:
a carrier; and
a toner, the toner comprising toner particles, each toner particle comprising:
a binder resin comprising a modified polyester resin and a crystalline polyester resin;
and
a colorant,
wherein the toner particles are obtained by a process comprising the steps of:

subjecting [[the]] a modified polyester resin prepolymer containing at least an isocyanate or epoxy group to at least one of dissolving and dispersing in an organic solvent to yield a solution or dispersion, wherein the modified polyester resin being reactive results from reaction of the modified polyester prepolymer with a compound having an active hydrogen group;

mixing the solution or dispersion with an aqueous medium comprising resin particles, and

subjecting the modified polyester resin to at least one of crosslinking and elongation in the aqueous medium.

Claim 41 (Currently Amended): A container for a developer, comprising:

a developer housed in the container,
wherein the developer comprises a toner, the toner comprising toner particles each comprising:

a binder resin comprising a modified polyester resin and a crystalline polyester resin;
and

a colorant,

wherein the toner particles are obtained by a process comprising the steps of:

subjecting [[the]] a modified polyester resin prepolymer containing at least an isocyanate or epoxy group to at least one of dissolving and dispersing in an organic solvent to yield a solution or dispersion, wherein the modified polyester resin being reactive results from reaction of the modified polyester prepolymer with a compound having an active hydrogen group;

mixing the solution or dispersion with an aqueous medium comprising resin particles, and

subjecting the modified polyester resin to at least one of crosslinking and elongation in the aqueous medium.

Claim 42 (Currently Amended): An image forming process comprising the steps of:
charging a photoconductor;
irradiating the photoconductor with imagewise light to form a latent electrostatic image;
developing the latent electrostatic image with a toner to form a toner image;
transferring the toner image from the photoconductor to a recording material; and
heating and pressing the transferred image with a fixing member to fix the image on the recording material,
wherein the fixing member is at least one of a roller and a belt, and
wherein the toner is a toner for electrostatic development, the toner comprising toner particles, each toner particle comprising:

a binder resin comprising a modified polyester resin and a crystalline polyester resin;
and

a colorant,

wherein the toner particles are obtained by a process comprising the steps of:

subjecting [[the]] a modified polyester resin prepolymer containing at least an isocyanate or epoxy group to at least one of dissolving and dispersing in an organic solvent to yield a solution or dispersion, wherein the modified polyester resin being reactive results from reaction of the modified polyester prepolymer with a compound having an active hydrogen group;

mixing the solution or dispersion with an aqueous medium comprising resin particles, and

subjecting the modified polyester resin to crosslinking and/or elongation in the aqueous medium.

DISCUSSION OF THE AMENDMENT

Claims 1 and 38-42 have each been amended to clarify that it is a modified polyester prepolymer, that contains at least an isocyanate or epoxy group, and which reacts with a compound having an active hydrogen group, to form the modified polyester resin. The amendment is supported in the specification at the paragraph bridging pages 24 and 25, through the paragraph bridging pages 31 and 32.

Claims 28, 30 and 31 have each been amended to be consistent with the above-discussed amendment to Claim 1.

No new matter is believed to have been added by the above amendment. Claims 1-42 remain pending in the application.